

# THE CONDOR

A Magazine of Western  
Ornithology

Volume XIII

January-February, 1911

Number 1



COOPER ORNITHOLOGICAL CLUB

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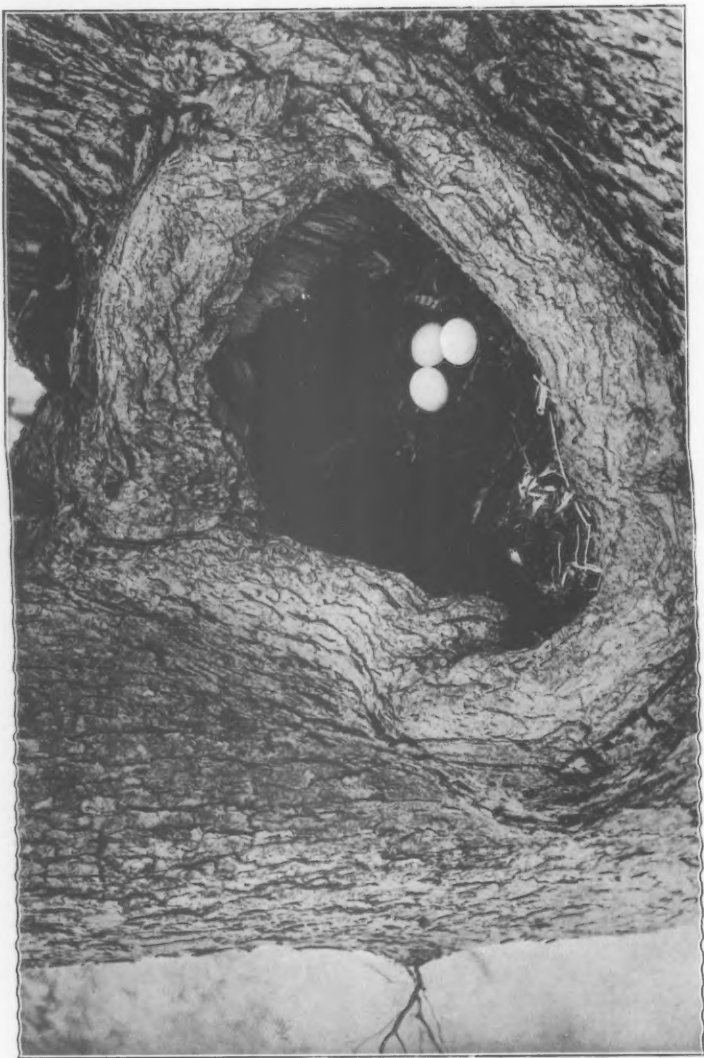


FIG. 1. THE HOME OF THE GREAT HORNED OWLS AS TAKEN ON APRIL 7, 1906

U.S. Nat. Museum  
Bureau of Birds  
Jan 22

# THE CONDOR A MAGAZINE OF WESTERN ORNITHOLOGY.



Volume XIII

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Number 1

## A HISTORY OF CERTAIN GREAT HORNED OWLS

By CHARLES R. KEVES

WITH THIRTEEN PHOTOS

MY experiences with Great Horned Owls, especially with a pair which has been under my observation for several years, have often suggested a contrast and comparison with Mr. Finley's work on the California Condor. In several respects our subjects and experiences show a certain broad resemblance. Both birds belong to the family of birds of prey, the one being the largest of the North American vultures, the other the greatest of all the owls. The Condor has passed into legend and literature as the largest bird of flight and the most graceful when on the wing; the Great Horned Owl occupies a place no less important in legend and literature as the symbol of brooding wisdom and solemn mystery. In both our studies too the rare privilege was enjoyed of extending our observations over the whole home period of the bird's life, from the eggs in the nest to the young ready for their first excursion into the outside world.

In most respects, however, our stories are as much in contrast as they could well be. The Condors had their home in one of the wildest and most inaccessible of Californian mountain regions; from their nest rim the owls could look out upon five farm houses, with their numerous outbuildings, and one school-house, all within a radius of five hundred yards and all neighbors of other homesteads and school-houses set down in the very peaceful and non-mountainous state of Iowa. The Condors, in their wild environment, were tame and well-disposed from the first and grew constantly more docile as the study of their home life proceeded, proving to be, apparently, the gentlest of all the raptorial birds; the Great Horned Owls, with surroundings that would seem to teach peace, had bad dispositions to begin with and these constantly grew worse until, after six weeks of suspense and with the longest of our claw marks still unhealed, my assistant and I felt a sense of relief when the young owls finally took to the tree tops, leaving us with fairly whole physi-

ogonomies and the feeling that we had done the best we could, under the circumstances, to preserve the record of an unusual set of conditions. The Great Horned Owls had proved to be, without much doubt, the fiercest of all the birds of prey. In one further respect, unfortunately, our experiences were in contrast to those of Mr. Finley and Mr. Bohlman. We found it impossible, by any means at our command to secure satisfactory negatives of the adult birds.\* We were unable to take them at distances of less than thirty feet and in every case they so blended with their background of gray bark, or gray bark and patches of snow, as not to be worth while. We regretted our inability to try the effect of a blind to operate from, but the mechanical difficulties in the way of such an attempt demanded more time for their solution than we had to give. We therefore gave our attention to the nest and contents, or rather as much attention as the old birds would allow us to give. As the adults were necessarily much under observation it is hoped that a record of their conduct may add some interest to the present article.

The beautiful deciduous forest, stretching for miles along the north bluffs of the Cedar River to the west of Mt. Vernon, had by 1890 been reduced to various detached groves of from ten to a hundred or more acres each in extent. About February of this latter year I was hunting through one of the larger of these



Fig. 2. THE OWLS' NESTING TIME; FROM TOWN THE TIMBER TRACT AND ENVIRONMENT ARE SEEN IN PANORAMIC VIEW

groves which, if one struck straight across the fields, was only a mile and a half from town. I remember watching the short, uneasy flights of a Great Horned Owl, but without locating his mate. I also remember talking with Mr. McFarland, a sturdy Scotchman who has occupied his homestead just across the road from the owls' hunting grounds since the early fifties, and learning that "big hoot-owls have always been in that timber." Soon after, the great oaks and hard maples of the eastern two-thirds of the grove fell under the ax, leaving to the west only a twenty-five acre remnant and, in the cut-over area, only some old white elms and a few young maples and lindens. Among these latter the forest soil soon gave way to a thick carpet of blue grass and so what had been heavy forest was gradually transformed into a rather open and still very beautiful timber pasture. It was taken for granted that the owls had moved elsewhere and for a series of years what had been famous "Sugar Grove" was practically forgotten. From 1901 on, however, my way several times led across the pasture and into the timber tract and I was surprised to note there each time the presence of Great Horned Owls. Once or twice I even

\* The portrait of the adult owl shown herewith (p. 7) was taken several years ago from a fine specimen brought in to the Cornell College biological laboratory. The picture was made by a student of zoology, who left the negative as property of the college.

took some pains to find a possible nesting site. There appeared to be none, so I concluded that the owls were merely transients. On February 6, 1906, just at nightfall a friend and I were walking along the public highway which forms the north boundary of the pasture and the woods. Suddenly the hooting of big owls boomed out from a nearby linden of the timber pasture and there, sure enough, were both birds engaged in ardent courtship and not minding our presence in the least. They stood facing each other on the same branch and, with feathers ruffled and heads bobbing, were hooting in low tones as they side-stepped toward one another and greeted one another with low bows. Finally they flew away, side by side, into the timber tract. That these were transient birds was beyond belief; so, on February 17, after allowing what seemed to be a fair margin of time, I decided to give the vicinity a thorough search. To make the story short the nest was at last found in the very place where previously it had not seemed worth while to look. It was not in the heavy timber at all but in one of the large elms of the pasture and, moreover, hardly more than fifty yards removed from the above-mentioned public road where teams were constantly passing. Toward the south the view was wild, open, and picturesque enough; to the west, north and east, at distances varying from 200 to 500 yards, were the school-house and farm houses as above stated.

A more fortunate set of conditions for the study of the owls' home life could hardly be hoped for. The short distance from town has already been indicated. The nest was in a large shallow hollow, 28×32 inches in diameter at the bottom, with an entrance 18×20 inches in diameter set at an angle of 45° and facing towards the southeast. The hollow was only 8 inches deep on the exposed side, thus permitting fairly good illumination. Of still more importance the nest site was only 22 feet from the ground and a strategic branch some five feet above the nest afforded a point of attachment for a ladder combination from which pictures might be taken. As Great Horned Owls generally make use of old hawks' nests placed in the tops of the largest trees the good fortune of this modest elevation can readily be appreciated. At the very moment when this nest was discovered a second pair of these birds were domiciled in a Redtail's nest placed in a tall white elm in heavy timber three miles and a half to the northwest and just ninety-two feet above the ground! Further, the proximity of farmhouses made certain the necessary supply of ladders and ropes. Mr. Benedict, who lived just across the road and only two hundred yards to the east, and Mr. McFarland, whose house stood only seventy-five yards farther to the east, were our interested and generous benefactors. Our opportunities were indeed great and, as I said, we greatly regretted our inability to make better use of them.



Fig. 3. ADULT MALE GREAT HORNED OWL;  
DURING A DAY'S CAPTIVITY HE WAS  
SILENT, PROUD AND DEFIANT

The weather on February 17 was fairly moderate, with the snow melting slightly, though the preceding days from February 6 had been stormy enough, with temperatures as severe as ten below zero. But the sitting bird was wonderfully protected from the storm winds of the north and west and flushed from three large perfect eggs that lay in the slight hollow of the decayed wood on the north side of the cavity. It seemed to me out of the question, with such temperature as February and March were sure to bring, to obtain any pictures without having the owls put their date a little later in the season; so, after a little quick thought, I pocketed these eggs and went home. My conviction that the owls would not abandon so ideal a site after a probable occupancy of years was fully confirmed when, on March 23, three more eggs were found, just like the first and lying in exactly the same little hollow.

Saturday, April 7, was the first warm day of spring. On this day Mr. W. White, a student in Cornell College, and I made the first attempts to secure pictures of the owls' home and surroundings. Mr. White's ingenuity proved greater than



Fig. 4. A PORTION OF THE OWLS' HUNTING RANGE AS SEEN FROM THE PUBLIC HIGHWAY; NEST TREE ON EXTREME RIGHT

my own and to him are to be credited the scheme for getting a camera within range of the nest and the successful picture of the eggs *in situ*. He also took the front view of the nest tree, looking northwest and showing the general situation and the interesting structure of the big elm itself. I merely helped him with the necessary ladders and ropes. Our two twenty-foot ladders, lashed together and drawn up with a guy rope so as to rest on the aforesaid strategic branch, made anything but a solid foundation from which to work. Nevertheless all the near views of the nest were taken from this unsteady perch, the camera being tied with strings to the sides and rungs of the topmost ladder.

On April 14 two young were found in the nest and the remaining egg was much pipped. Both young were entirely blind and only one gave much sign of life. This was done by uttering a querulous little note somewhat like that of a very young chicken when excited but not sufficiently frightened to peep. The older one was able to hold its head up slightly while the smaller was entirely help-

less. Both shivered as if from cold, the day being cool and showery. In the nest cavity were a headless Bobwhite and the hind parts of an adult cotton-tail rabbit. The weather conditions prevented our trying to secure a negative. On April 19 only two young were found in the nest, with nothing at all to indicate the fate of the third egg. The young appeared quite lifeless, allowing their bills, which were of a slaty color with darker tips, to rest in the decayed wood of the nest bottom. The feather sheaths were pushing out on the dorsal and scapular tracts, and at the tips of these the brown juvenile plumage was beginning to show. The primary quills were also sprouting but the feathers themselves were still entirely



Fig. 5. THE OLD ELM WITH THE NEST CAVITY IS IN ITSELF A NATURAL CURIOSITY;  
VIEW NORTHWEST

concealed. The nest cavity contained a headless adult rabbit and a headless coot, also the hind parts of a young rabbit about the size of a striped gopher. No assistant was available on this day. On April 21 the young showed very noticeable increase in size, the brown feathers now showing all over the dorsal and scapular areas. The eyes had partially opened in the form of a rather narrow ellipse. Still quite listless the young emitted the querulous note as described but did not snap their mandibles. The view inside the nest hollow was rather a pitiful one. In addition to half a coot and half a rabbit (probably the leavings of two days before) there

lay scattered about four young cottontails hardly as large as an adult striped gopher. Two were whole, one headless, and only the hind parts of the fourth remained. A high wind and a chilly day caused Mr. White and me to lose this extraordinary picture. By April 26 the eyes of the young birds were nearly or quite open, the



Fig. 6. FEBRUARY 7, 1907; THE GRAY PLUMAGE AND WHITE THROAT PATCH OF THE OLD OWL SITTING ON THE RIM OF THE NEST CAVITY BLEND PERFECTLY WITH THE BARK AND SNOW

iris being of a milky yellow or light lemon yellow. The mandibles, which were now grayish yellow in color, were snapped vigorously. The primary quills were an inch and a half long, the feathers just beginning to show at the tips. The food in

the nest consisted of the hind parts of an adult cotton-tail, an entire striped gopher and a headless Bob-white. Various feathers of a Flicker also indicated a capture of this species. I was again without an assistant. On April 28, with the help of Mr. George H. Burge, I was able to repeat Mr. White's performance of three weeks before and get a successful negative of the nest and contents. The young were now two weeks old, still quite drowsy and inert, and entirely disinclined to open their eyes toward the light. The only food in the nest was the hind quarter of an adult cotton-tail.

Thus, for 1906, weather conditions thought to be insuperable and frequent inability to get a helper when one was needed had permitted a net return of only three



Fig. 7. MARCH 16, 1907; WHERE THE DEAD ARE MORE IN EVIDENCE THAN THE LIVING; OWLETS FOUR TO EIGHT DAYS OLD

good negatives. Further trips were made alone to the owls' home and a few further observations recorded. By May 9 the young seemed to have doubled in size and were wide-awake and combative. In size they were even then, at three and a half weeks, as large in appearance as a two-thirds grown Plymouth Rock hen. In the nest lay the hind quarters of an adult rabbit, a headless young rabbit about one-third grown, and a large headless brown rat. Being away from town myself, on May 16 Mr. White, with a student assistant, went to the timber pasture intending to secure a fourth picture. The nest was found empty, the owlets having occupied it this season only about four weeks. Soon after that, as I learned from one of the neighbors, two little girls gathering flowers in the timber tract came across both

owlets as they were scrambling along the ground and evidently still unable to fly. The girls reported the strange creatures to a hired man who was temporarily in the neighborhood and he hunted up the "varmints" and clubbed them to death. The real neighbors of the owls would not have done this. They were all interested in the big birds and all reported that their large flocks of chickens had not suffered from their presence.

A further word should be added on the behavior of the adult birds during the first season. With two of us at the nest their demonstrations, although energetic enough, never proved dangerous. Both birds merely came near, flying back and forth at distances varying from thirty to a hundred feet, snapping their mandibles, ruffling their feathers, and hooting out vigorous protests. It was different when one person was at the nest alone. On April 28 I had arrived at the



Fig. 8. MARCH 30, 1907; THE BEGINNINGS OF INTELLIGENCE; OWLETS EIGHTEEN TO TWENTY-TWO DAYS OLD

old elm about twenty minutes ahead of Mr. Burge and, standing on the next to the top round of a twenty-foot ladder, was making some examination of the young and the other contents of the nest cavity. The ladder necessarily stood as nearly vertical as possible to reach the cavity at all and, as the big tree was about five feet in diameter just below the hollow, the hold was none too secure. Fortunately a small horizontal branch shot out from the heavy trunk on the northeast side and against this the top three inches of the ladder found some support. Without this I dislike to think what might have happened when that stunning blow came in from the south quarter. It came absolutely unexpected and was so violent as to leave the left side of my head quite numb. With my hand I discovered that blood was running down my cheek and a quick glance around showed my assailant stepping

up and down on a nearby limb and clearly ready to come again. Under the circumstances I slid down the ladder to firmer vantage ground. The slash which began on the left cheek and ran across the left ear was rather ugly but not dangerous. Considering the eight claws of a Great Horned Owl, each an inch and a quarter in length, I had gotten off easily. Evidently only one claw had taken effect, the curvature of the great tree trunk and my clinging position over the nest rim having given, doubtless, some protection. The numbness was probably caused by the stroke of a rushing wing.

When on May 9 I was again compelled to visit the nest alone I knew what to expect and so was constantly on my guard. About three seconds study of the young birds and nest contents was alternated with about the same amount of scrutiny of the immediate horizon. In this

way it was possible to define an adult owl's manner of attack. Three times on this occasion one of the birds flew in from a neighboring tree and with strong stroke of wing came straight at my head. It was not at all the stoop of hawk or falcon, but rather the onrush of a heavy projectile with a very flat trajectory. Like a large projectile too the flight was visible and so all the more disconcerting; unlike a projectile it was noiseless as a flying shadow. Audubon speaks of the hunting flight of the Great Horned Owl as being incredibly swift and, kind reader, I am quite ready to agree with him. The big bird, perched on a branch from thirty to fifty feet away, first shifts nervously from one foot



Fig. 9. APRIL 13, 1907; OWLETS OF VARIOUS MINDS; AGE THIRTY-TWO TO THIRTY-SIX DAYS

to the other, then launches swiftly into space. There is just time to brace oneself a little, swing one's cap, and quickly duck one's head as the great missile rushes past. The owl keeps straight on her course and alights with heavy impact on a branch of a neighboring tree. Here she faces about and very likely comes straight back again. This process became finally a bit too exciting and, after making certain that the headless quadruped lying in the nest over behind the owlets was just a big house rat, I slipped down the ladder and went home.

February 7, 1907, was cold and clear after the terrific snow storm of the night before. On this day Mr. James R. Smith, a young farmer of the vicinity who had always been interested in birds and who was destined to be my skillful assistant throughout the season, accompanied me to the snow-covered timber pasture. As we approached the nest tree of the year before a fox squirrel leaped from one of the smaller adjacent trees and, starting up the big elm, ran along the rim of the great knot-hole which formed the owls' doorway and scampered on to a topmost branch. If the owl were at home the saucy fellow surely passed within ten inches of her face.

For a moment we felt dubious as to the nest being occupied. As we approached the tree, however, a Great Horned Owl flew from one of the higher branches, aroused either by the squirrel or, more likely, by our own approach. This was more favorable. We gave the tree a few kicks, when the sitting bird hopped up lightly to the rim of the cavity, looked across the white landscape for several seconds, then spread her nearly five feet of wings and flew silently away.

Our first mistake for 1907 was in not looking into the nest on this first day. Our reasons for not doing so were the belief that the set of eggs could hardly be complete at this time and especially the fear that the egg or eggs could not stand exposure even for a short time on so cold a day. My present belief is that this fear was unfounded. Just two days later, on February 9, at about three o'clock in the afternoon, I visited the nest again and found the set of three eggs complete.



Fig. 10. APRIL 18, 1907; AT THE BASE OF THE OLD NEST TREE; YOUNG THIRTY-SEVEN TO FORTY-ONE DAYS OLD

These were lying in a slight hollow as before, but as far back in the cavity as possible. Except for a small space about the eggs the house was filled, even to the door sill, with snow. It was a picture indeed, but one over which we did not dare tarry in freezing weather. All the eggs were nest-stained and it did not look as if any one of them had been laid that day. However, this was uncertain and I had lost a possible opportunity of learning just when the set became complete. This was regrettable, for no one seems to know the period of incubation of an egg of the Great Horned Owl. The older ornithologists made their guess at three weeks. Bendire later expresses his belief that this period is too short and that four weeks is probably nearer to the truth. I have not determined the point though my data still possesses some interest. Toward the end of the month I

began to visit the nest as often as possible to ascertain as nearly as I could when the chicks appeared and how long the hatching process lasted. It was not until March 6, at 2 p. m., that I found one of the eggs pipped, a small round area no larger than a pea being broken. On March 7 at the same hour the broken area was the size of a dime. I could distinctly hear, however, several times repeated, the low twittered note of the still imprisoned chick. The other eggs still showed no sign. Bad weather and pressure of other work now prevented a further visit until March 11, at two-thirty o'clock. Two very callow owlets were now in the nest and one slightly pipped egg. The young birds were not completely protected by their white down as yet, the bare skin being visible between the tracts. On March 16 three young owls of different sizes were found in the nest, one being quite markedly smaller than the other two. The query remains: how long does it



Fig. 11. APRIL 22, 1907; DORSAL AND LATERAL VIEWS; AGE FORTY-ONE TO FORTY-FIVE DAYS

take a Great Horned Owl's egg to hatch? The above are the data kept and anyone can make estimates on them. It seems certain that these birds did not lay an egg oftener than once in two days and that the period of incubation could not have been less than thirty days, with the probabilities on the side of a rather longer period.

For our second year's work we had the experience of the first to go on, we were more confident of the owlets' ability to bear exposure, and so decided to photograph them at least once a week, let the weather offer what it would. And the offerings were of sufficient variety! On March 16, with the young from four to eight days old approximately, the temperature was well above freezing and comfortable, but we were unable to expose a plate until 4 p. m., the sun became covered with black clouds, and we were on the shady side of the tree. We were not hopeful, but a long exposure accomplished our purpose. In addition to the parts of three adult cotton-tails and one Bob-white which the camera shows, a

fourth rabbit and a second Bob-white, also a plump field mouse, do not appear in the picture, being tucked away under the over-hanging roof to the left or buried under other remains. It was chilly on March 30 and a high wind was blowing in from the northwest. On April 13 we had a regular northwest gale to contend with and freezing temperature added. We varied our work with the camera by runs across the frozen timber pasture. Why it was that our negatives taken on these last two dates did not show motion we have never satisfactorily explained to ourselves, for only time exposures could be used. Certain it is that both the big elm and our nearly thirty-foot stretch of ladder were swaying back and forth under the lash of that roaring wind. The gentle rain that was falling when, on April 18, Mr. Benedict helped me bring the now lively owlets to the base of the old nest tree, proved to be really no obstacle at all. It splashed water against the lens of the camera but the negatives gave no sign. The first fine weather of spring was calling forth the backward buds of the young hard maples when, on April 22, the owlets posed for the last time on an old oak stump just east of the nest tree. The weather encountered on dates not mentioned was composed of variations of the above, but the rule was freezing temperatures with high winds. Under all the conditions the young owls thrived and did not seem to mind seriously our intrusion into their home life.

During the season of 1907 the food contents found in the nest cavity reach the following total: five Bob-whites, two meadow mice, one domestic pigeon, one Flicker, two American Coots, one King Rail, nineteen adult cotton-tails. This list is not, of course, an accurate account of the various captures brought to the nest. It merely records what was seen there on the sixteen trips made. The same bird or mammal was doubtless sometimes counted twice and captures were in all probability brought in of which no remnants were seen. I think not more than three different Bob-whites were seen, quite likely only two, and the number of cotton-tails is also probably too high. The fact seems to be that both birds and quadrupeds of the larger size, after being eaten from the head to the tougher hind parts, were then left two or three days untouched and finally removed from the nest altogether. These were not dropped about the base of the tree, however, and in fact no trace of food remnants were found at any time except in the nest itself. That some refuse was removed from the nest seems probable from such facts as the following. The above mentioned two Bob-whites, one meadow mouse, and four rabbits found in the nest cavity on March 16 were all in fairly whole condition, aside from the heads. On March 23 parts of five rabbits were found, represented by the hind quarters only, and one Bob-white with the breast eaten away. These were mostly rather desiccated remnants and I took them to be, for the most part, leftovers from the week before. On March 30 the nest was entirely clean except for a freshly killed white pigeon. Generally speaking the nest cavity was well kept, a fact which seemed to indicate removal of the excrement of the young by the old birds.

Our second season's active work with the owls was not without its exciting features. Twice when alone I had had, in spite of close watchfulness, pretty close brushes with one of the old birds. But it was not until the young were removed from the nest for the last two attempts to get clearer pictures that there was any real element of danger. With the three pugnacious owlets grouped on the ground at the base of the nest tree both old birds now closed in, teetering and dancing and hooting on branches about thirty feet from our heads or brushing close past us as they took up new positions or sought for an opening. Mr. Benedict, who was my

helper this time, literally stood guard *over* me as, with camera close to the ground, I stooped under the focusing cloth. Except for his full-voiced yells and well-aimed sticks I am sure my position would have been utterly untenable.

The last try for pictures, when the young were placed on the old stump a few feet to the east of the big elm, did not pass off so smoothly. Whether the city friend who had become interested in the proceedings and who was this time trusted as my body guard was less effective with voice and missiles than he should have been or whether the owls no longer feared an ordinary demonstration, it would be hard to say. Two of the youngsters were already on the oak stump and I was somewhere aloft in quest of the third. Presumably I was either just reaching over the nest rim for the last snapping owlet or else had just started down with him. My memory has never been clear on the point nor was my excited friend ever able



Fig. 12. APRIL 22, 1907; A FRONTAL VIEW; TWO DAYS LATER ALL WERE IN THE TREE TOPS

to elucidate fully. At any rate my position for the moment must have been strategically bad. The sharp cry "Look out!" barely gave me time to duck my head, when a resounding whack was administered across my shoulders. This was not damaging, but the return stroke would come quickly and doubtless be better placed. It came and I ducked again, but not quite far enough, or possibly not at exactly the right instant. The shock was profound. The list of damages showed three scalp wounds from an inch to nearly three inches in length, while my cap had disappeared entirely from the scene. This was later found under a tree some hundred yards to the south, a punctured souvenir of our last intimate contact with the Great Horned Owls.

After each sitting the young were replaced in the nest and two days after the stormy last one, on April 24, the house was found empty and the family was in the

tree-tops. It will be noted that the owlets remained in the nest about two weeks longer in 1907 than in 1906. One youngster was in the very top branches of the old elm of his nativity, fully fifty feet above the deserted home or more than seventy feet above the ground; another was a hundred yards away in the timber tract and some eighteen feet up in a linden; both were motionless and inconspicuous among the budding branches. In the time at disposal the third brother could not be found. Two days before this the young had shown neither inclination nor ability to fly. It seems certain that no one of them could have mounted a vertical

distance of fifty feet through any powers of his own. The conclusion seems inevitable that in some way the old birds carried the young to the places where I found them. But the secret belongs to the owls, for no one witnessed the leave-taking.

A little more than two months passed by and on a walk through their now heavily-foliaged retreat two great heavy owls, seemingly, and doubtless actually, larger than adults, were startled from the ground near some prostrate tree trunks, from which they flew slowly into the nearby trees. Almost at the same moment a third dropped from the lower branches of an oak and took up a new position deeper in the shadows of the woods. So far as mere size was concerned the owlets had reached and even surpassed the adult owl estate, though probably still under the care and tutelage of their elders. From now on they would need to shrink and harden into the strength and agility necessary to enter the competition of adult owl life and maintain themselves in the general struggle for existence.

February of 1908 again found Mr. Smith and me rapping anxiously at the old elm of the timber pasture. With the facilities at our disposal we could accomplish little more with the young birds, but during the year we had formulated a plan by which there might be a bare possibility



Fig. 13. THE OWL HOME OF 1908; A VAIN LOOK ALOFT

of securing a portrait of the old owl as she sat within her doorway. Our hopes were raised by the reports of both Mr. Benedict and Mr. McFarland that, as the nesting season approached, the owls had been heard hooting as usual. Our misgivings began when we found piled about the nest-tree the cord-wood from a number of the neighboring young lindens. The old nest cavity was found empty. The owls were able to endure intrusion into their home life for two seasons, but evidently did not take kindly to radical changes in their immediate environment.

A mile west of the old home is another forest fragment of perhaps sixty acres

and in this a pair of Red-tailed Hawks had built their bulky aerie in a tall white ash tree, seventy-five feet from the ground. Following the custom of most of their tribe when suitable hollow trees are no longer to be had, the big owls appropriated this new refuge and in it, in spite of rain, sleet, snow, and wind, successfully raised their brood. To be sure we had no exact proof that these were the very owls with which we had dealt in other years, nevertheless we felt morally certain. The new locality was the nearest available one and for many years, until 1908, had not boasted its pair of owls.

The years 1909 and 1910 add nothing new to the history of the owls except that, in the former year, a January gale destroyed the nest in the ash tree and the valiant pair were apparently forced to a new, but similar, retreat. Their history, so far as we were concerned, was a closed one. During the season of 1907 I had located five pairs of Great Horned Owls within a radius of seven miles of Mt. Vernon. None of these could be intimately studied except the pair whose history I have tried to trace. In February of 1910 I again tried to locate breeding birds of this species, but without success. In spite of the big fellow's tenacity in clinging to a locality once chosen, in spite of his cleverness in escaping observation, it almost seems now that the coming of the wanton shot-gun army and the going of the protecting forests were gradually making the Great Horned Owl, along with many another species without which the woods are stiller and humanity poorer, in the more settled parts of our country at least, a member of a vanishing race.

## NESTING OF THE CALIFORNIA CUCKOO

By ALFRED C. SHELTON

WITH ONE PHOTO

Russian River, flowing through northern Sonoma County, and emptying into the Pacific Ocean at Duncan's Mills, receives one small tributary from the south, designated on the map as Laguna de Santa Rosa. In the locality of which I write, about five miles southeast of Sebastopol, this stream, known locally as the "Lagoon", becomes, after some winter storm, a turbulent river, flooding acres upon acres of bottom land. In summer its course is marked by a chain of long, rather narrow ponds, many of which are deep. The banks, and much of the intervening space between these ponds, are covered with a thick growth of willow, small ash and scrub oak, while the whole is tangled together with an undergrowth of poison-oak, wild blackberry and various creepers, forming, as it were, an impenetrable jungle, hanging far out over the water. Occasionally there is an opening in the brush, and in such a case, the bank is fringed with pond-lilies and tall rushes, and here may be caught black bass and cat-fish, together with an occasional trout. To one who may perchance take an interest in the feathered inhabitants, this old lagoon has an especial attraction, for it is a breeding home of the California Cuckoo.

Of all migratory birds breeding in this vicinity, the Cuckoo is the last to arrive in the spring, usually appearing during the latter part of May or the first week of June. Upon its arrival, this bird keeps to the higher land, among the oaks and other timber, for a period of two or three weeks before retiring to the willow bottoms to breed. During this period it is wild and shy and difficult to

approach. Most active in the early morning, its characteristic note, a loud, clear "kow-kow-kow," may be heard coming from some tree or group of trees, and perchance an answering "kow-kow-kow," may come from another tree, some distance away. When heard a few times, this note is easily imitated and is readily answered by the adults. Cautiously approaching the tree from which the call has come, the bird may be seen sitting among the topmost branches, or as is far more likely, may be seen to dash forth and fly with a swift and graceful flight to another tree some distance away. Again may the tree be approached and again may the bird be seen to fly, but this time not to stop until well beyond reach, and only a distant "kow-kow-kow" comes floating back on the still morning air to let you know whence the bird has gone.

After the birds retire to the willow bottoms to breed, their entire attitude changes. When watched and studied in the seclusion of their brush grown haunts, while engrossed with the cares of their domestic duties, the Cuckoos cease to be



Fig. 14. HAUNTS OF THE CALIFORNIA CUCKOO, IN  
SONOMA COUNTY

the wild, shy birds of the upland timber. The familiar "kow-kow-kow" is now forsaken for another note, a low guttural note, "kuk-kuk-kuk," always uttered by a brooding bird and is the most common call of the cuckoo during the breeding season. One other note they have, uttered like the foregoing, only during the nesting period. This note I have never been able to imitate. It has a wonderfully ventriloquistic power, and when heard at a distance of fifty yards, often seems to be half a mile or more away. When uttered, this particular call begins with the low "kuk-kuk" but gradually changes to more of the "kow-kow-kow" note, and, just before the end, closely resembles a dull, heavy drumming on a resonant limb.

On the 26th of June, 1909, while hunting through a portion of the above mentioned lagoon, in search of belated nests of the Russet-backed Thrush, I found a nest of the California Cuckoo which was a very substantial structure, considering the inefficiency of Cuckoos in general, as nest builders. It was placed upon a

large horizontal limb of a willow tree, at a point where two small limbs joined the larger one, and these held the nest firm. It was composed of long dry twigs, to which clung a little moss, and this, when the material was woven into a platform, held the structure together. It was deeply cupped, for the species, and contained two fresh eggs. The bird was brooding and showed no signs of fear as I climbed the tree. She did not leave her post, but sat watching me intently as I approached. She neither uttered a sound, nor ruffled a feather, but as I reached out to touch her, she dropped from her nest and glided away among the willows.

On July 4, of the same year, while bass fishing in one of the ponds of the lagoon, my mind was often diverted from my rod by a low "kuk-kuk-kuk" in the brush near by. When an adult bird dashed from the willows and glided away down stream, skimming along just above the surface of the water, I laid aside my rod and began to investigate. Entering the brush for a distance of perhaps thirty yards, I found the object of my search, a frail platform of twigs, placed about seven feet from the ground in a bunch of poison oak. The female was brooding and watched me intently as I approached. An old log was lying upon the ground directly beneath the nest, and as I stood upon it, and reached up to pull down the branch upon which the nest was built, the bird dropped from her nest and glided away among the willows, in exactly the same manner as the first. This nest was one of the frailest examples of bird architecture I have ever seen. It contained one fresh egg which could easily be seen from beneath. As I stood there, wondering what law of nature prevented the wind from scattering that home and its contents upon the ground, I heard something rustle in the branches above me, and glancing up, beheld the anxious parent hopping from branch to branch, holding in her beak a large yellow caterpillar. I then left for about ten minutes and upon returning, saw her again brooding upon her nest. Again I flushed her, as I wished to determine whether or not she would easily desert her nest. Just before leaving for home, I quietly returned to the spot and saw her contentedly brooding. One week later I revisited the place and found the set to consist of two large, greenish blue eggs. Soon after this the cuckoos began their regular migration, and the last one seen in 1909 was about the middle of July. One evening as I was doing my chores one passed over flying low. She went directly to a clump of willows, in which I have reason to believe she had a nest though I was unable to find it.

On the 31st of May, 1910, came the first of the California Cuckoos. On the morning of that date, about five o'clock, a loud, clear "kow-kow-kow" came floating from the top of a large pine near by. As I glanced in that direction, two birds flew from the tree and sailed across a small valley to the hills beyond. From that day on they became more and more numerous, and for two weeks remained in the uplands and then, as abruptly as they had come, all disappeared, having retired to their nesting haunts. Pressure of ranch work prevented my visiting the old lagoon until July 7. On that date, as I approached the willow thickets, a few birds were heard calling from time to time, from different parts of the brush. As I began to work my way through the tangle, the first bird I saw was a nearly fledged young one. It hopped around the branches above my head and seemed to have no fear. It was much the same as the old birds, except that its tail had attained only about half the normal length, and this, with its large body made the bird seem awkward in the extreme. The birds were not as plentiful as they had been in the spring. One adult, which I soon located, readily answered my calls. She was in the topmost branches of a willow, and, as I stood below, would hop

from limb to limb, uttering from time to time, a low "kuk-kuk". She was unusually gentle and her attitude was one of curiosity more than fear. She soon satisfied her curiosity, however, and glided away into the brush. Not another glimpse could I get of her, though she answered my call several times.

On July 26 I again visited the lagoon. For nearly two hours I searched the brush in vain. From time to time I heard a bird calling a long distance up stream. At last one answered my call near by, and I quietly approached the spot from which the note came. I then repeated the call, only to have it answered farther on up stream. This continued; in all the time I was there, not a glimpse of a Cuckoo did I obtain. The cares of nesting were over and the Cuckoo was once more the wild shy bird of the upland timber. From the depths of the brush-grown banks, out over the deep still ponds of the old lagoon, floated an occasional "wandering voice", and another season of nesting troubles and paternal duties in the life of the California Cuckoo was over.

#### COURTSHIP OF THE AMERICAN GOLDEN-EYE OR WHISTLER (*CLANGULA CLANGULA AMERICANA*)

By WILLIAM BREWSTER<sup>1</sup>

WITH DRAWINGS BY L. A. FUERTES

ALTHOUGH Dr. C. W. Townsend has given us a recent and admirable account<sup>2</sup> of the manner in which the males of the American Golden-eye pay court to the females, this subject is still comparatively novel and so very full of interest that I am tempted to offer some observations of my own regarding it. They were noted briefly on loose slips of paper when I was making them, and written out more fully in my journal only a few hours later. As the journal description records them exactly as they impressed me at a time when they were fresh in my mind and recollection, I shall quote from it almost literally, making, indeed, no changes save such as seem absolutely necessary. The figures illustrating some of the poses assumed by the birds when "showing off" have been kindly drawn for me by Mr. Fuertes from rough sketches in my note book. The journal runs as follows:

*Back Bay Basin, Boston, Massachusetts, Feb. 27, 1909.* I saw and heard today for the first time, under exceptionally favorable conditions, the courting actions and love notes of the American Golden-eye (*Clangula clangula americana*). Dr. C. W. Townsend gave me some account of them last year, just after he had witnessed them in February or March. On February 24 of the present year he was kind enough to notify me that the birds had already begun to perform (on the 22nd I think). I have therefore taken advantage of the first favorable opportunity to learn something of the matter at first hand.

When I left our house about nine o'clock this morning the sky was cloudless, but a thin mist or haze obscured distant objects. The air had a sharp, frosty "tang", although the thermometer had already risen from 26° to 34° Fahrenheit. There was a light easterly wind, but it began to die away soon after I reached my

<sup>1</sup> Read before the American Ornithologists' Union Congress at Washington, November 13, 1910.

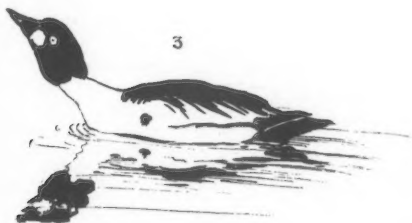
<sup>2</sup> Auk XXVII, no. 2, April 1910, pp. 177-179.



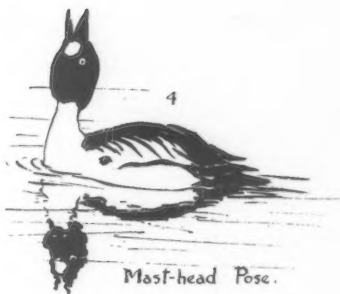
Crouching Pose.



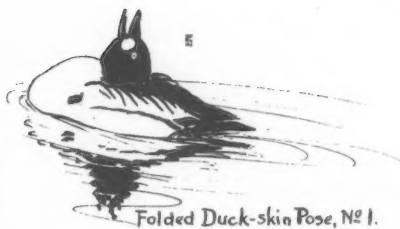
Wounded Duck Pose.



Bowaprit Pose.



Mast-head Pose.



Folded Duck-skin Pose, No 1.



Folded Duck-skin Pose, No 2

Fig. 15. COURTSHIP POSES OF GOLDEN-EYE  
Drawings by L. A. Puertes

destination and alighted from the electric car at the farther end of Harvard Bridge. No birds of any kind were then visible above (i. e., to the northwestward of) the bridge; but just below it I at once saw fifty or sixty Golden-eyes scattered about singly, in pairs and in small flocks on the slightly ruffled water. Walking down the roadway at the rear of the line of houses that front on Beacon Street I came to a pile of lumber on the recently filled parkway land about one hundred yards from the bridge and at the very edge of the river. Here I found a comfortable seat on which I remained for over an hour watching the birds through my glass and taking down brief notes of their behaviour from time to time. The lumber screened me somewhat from their view, but I doubt if this made any particular difference; for they did not seem to notice me when I stood up and walked about. Those nearest at hand were within shotgun range, those farthest removed not over two hundred yards away; the others were dispersed over the intermediate space, occurring most numerous, perhaps, about midway between its outer and inner confines, one hundred yards or so from where I sat. As many of them kept diving and shifting under water from one group to the next it was impossible to count them accurately, but the total number was not far from sixty. There were about thirty fully adult males, perhaps ten immature males (showing only a little white on cheeks and scapulars), and some twenty females. Most of the females appeared to have unicolor and dark brown or blackish bills, but one showed a conspicuous bar of golden yellow on the culmen just behind the nail and a well marked dusky band crossing the white on the wing. This bird was evidently closely similar to one that I sent to Professor Baird in December, 1871, which he pronounced to be an example of "*Bucephala Icelandica*"<sup>1</sup> but which I afterwards concluded was an aberrant specimen of *americana*. Another female had a short, abruptly tapering bill which appeared to be *almost wholly of a rich chrome yellow color*. The white on its wings was crossed by a conspicuous black bar and the brown of its head and neck was at least two shades deeper than in any of the other females, while its head had a purplish sheen which showed every time the sunlight struck it at just the right angle. All this I saw most plainly, for the bird was twice within forty yards of me and for half an hour within one hundred yards; moreover it was repeatedly joined by one or more females of the common Golden-eye with which I was thus enabled to directly compare it. Although I do not claim to have positively identified it, I have really no doubt that it was a perfectly typical representative of Barrow's Golden-eye. Dr. C. W. Townsend tells me that he observed a similar looking female near the same place on February 22nd. The one seen by me on the morning of the 27th kept by itself for the most part; but occasionally it joined, or was joined by, some of the American Golden-eyes, and once it swam a long distance in company with the female having the yellow bar on the bill, both birds being followed and *most assiduously courted* by seven or eight full-plumaged Whistler drakes who, moreover, continued to devote themselves to the female Barrow's Golden-eye after the other bird of the same sex (the aberrant *americana*) had left the group.

I had not been long at the lumber pile when the wind died away completely. During the next half hour the entire Basin was almost without a ripple and shining in the sunlight like a burnished mirror. The haze, too, had nearly disappeared. As the sun was behind me its light aided, rather than interfered with, my observation of the Golden-eyes. The females were comparatively inconspicuous, partly because of their sober coloring but also, I thought, because they habit-

<sup>1</sup> cf. Brewster, Auk xxvi, Apr. 1909, pp. 154-155.

ually sank themselves deeper in the water than did the drakes. The latter, whether adult or immature, floated very lightly, showing the greater part of their bodies above the surface. Those in full nuptial plumage were handsome birds whose strongly contrasting black and white coloring made them conspicuous under all conditions and at long distances. When they were near at hand I could see the greenish iridescence on their big, fluffy heads glint and shimmer in the sunlight. Evidently they were quite conscious of their personal attractiveness, and devoted themselves to bringing it to the attention of the females by a variety of odd and interesting motions some of which were calculated to display it to the best advantage. They kept calling, also, uttering a queer, strident note wholly new to me. While thus engaged they were incessantly swimming to and fro, shifting from one group of birds to another and ever seeking or following the females with tireless persistence, but without haste and with a decorous restraint of manner most unusual in courting birds and very interesting to behold. By no means all the fully mature drakes took part in these proceedings. There were at least five or six of them who remained apart from the others, either in solitary state or each in company with a female apparently its mate, and who busied themselves during the entire time I had them under observation in diving for food or floating idly on the glassy surface, preening their feathers every now and then. The others, while actively employed in "showing off", in the presence of the females, indulged, as I have said, in a variety of movements, gesticulations and postures, all more or less grotesque and probably most of them peculiar to the season of love-making if not also characteristic of the ceremonial of Whistler courtship. I saw them all repeated many times under conditions very favorable for close and accurate observation. For convenience of treatment in describing them I shall first designate them by the following terms which, if somewhat fanciful, are, I trust, at least helpfully suggestive:

## GESTICULATIONS

1. The *nod*—made with the head.
2. The *kick*—made upward with one or both (?) feet.
3. The *forward thrust*—of the head and neck.
4. The *upward thrust*—of the head and neck.
5. The *back thrust*—of the head and neck.

## FIXED AND PECULIAR ATTITUDES

1. The *crouching pose*.
2. The *wounded duck pose*.
3. The *bow-sprit pose*.
4. The *mast-head pose*.
5. The *folded duck-skin pose*.

To these should be added, for purposes of comparison,

6. The *normal pose*—i.e., the position ordinarily taken by birds of both sexes when floating or swimming about.

The love note to which I have alluded may be known as the *bleat*. I do not like this term, for it is not accurately suggestive of the sound; but it comes nearer being so than anything else I can think of—hence its adoption. After hearing it hundreds of times this morning I should describe it as a short, flat, vibrant *paaap* not unlike that of the Woodcock but a trifle more prolonged and also less harsh and incisive. It reminded me somewhat of the blast of a penny trumpet, less forcibly of the wheezy quack of a *drake* Black Duck. It did not

seem loud when uttered within fifty yards of me, yet I could hear it distinctly at four or five times that distance when the air was still. It was sometimes doubled (*paap-paap*) and occasionally trebled (*paap-paa-paa*). I suspected at first that these doubled and trebled notes were produced by two or three birds calling nearly together but on studying the sounds closely I found that their component parts or syllables were each shorter than the normal single call and otherwise slightly different. This led me to conclude that the compound notes were probably made by single birds. Negative evidence supporting this inference was furnished by the fact that whenever I was able to watch several drakes performing in company I noticed that they always called in orderly succession, at distinctly separate intervals, and that their notes were of normal length and form. The intervals, however, were often very brief and when nine or ten birds were engaged at once their voices produced a volume of sound well nigh continuous and lasting perhaps for half a minute or more. This, softened by distance and coming over the glassy, sun-lit water from just where, it would have been difficult to determine had not its author been plainly visible, was by no means unpleasing in its general effect. But when the *paap* was heard near at hand and critically regarded, it did not impress me so favorably. Indeed it is essentially unmusical and decidedly less attractive in quality than the humming-top sound made by the wings in flight to which the Whistler owes its familiar name and which was much in evidence this morning whenever the birds were moving from place to place. They rose from the water with great apparent ease and almost as quickly as Black Duck, despite the absence of wind. When they alighted they often struck the water almost at full speed, just after closing their wings, sending the spray flashing up into the sunshine and ploughing furrows yards in length as they slid over the surface before losing the impetus of flight. Besides the bleat and the whistling of wings I heard them make no other sound.

Just as the *paap* was uttered—or perhaps a fraction of a second later—a slender shower or spurt of water, not unlike that emanating from an old-fashioned, metal garden syringe vigorously used, might often (but by no means invariably) be seen rising immediately behind the bird to a height of one or two feet. Sometimes it was thrown almost straight upwards, but oftener, it followed a long, elliptical or bow-shaped, backward curve, the heavier drops falling to the surface within a yard of the bird, the lighter ones striking two or three yards at its rear. This jet-like puff of mingled drops and spray was sometimes conspicuous at a distance of fully a quarter of a mile. It was produced, without question, by a vigorous and obviously most dextrous upward kick of the Whistler's broad, webbed feet which, indeed, I saw plainly more than once, jerked out of water just as the last drops were ascending into the air. When, as occasionally happened, the jet was doubled in volume, and also apparently somewhat divided at the base, I thought that the bird had made simultaneous use of both feet, but of this I could not be sure for I never actually saw more than one of them. Owing to its force and direction the kick caused the hinder portions of the bird's body to sink perceptibly in the water for an instant, after which these parts bobbed still more obviously upward before recovering the position usual to the floating or swimming bird.

*The crouching posture.* This was usually assumed directly from the normal swimming attitude and by an almost instantaneous movement, the head being thrust forward well above the surface, the neck deeply curved, the back somewhat humped. After remaining in this posture absolutely motionless for two or three seconds the Whistler would either resume its normal attitude or change to—

*The wounded duck posture.* In this the bird would lie with head and ex-

tended neck flat on the surface, and with its body so deeply immersed that from bill to tail it showed no part much higher than the rest, looking, indeed, like a stick or reed-stem partly submerged. I have frequently seen a wounded Black Duck or Blue-winged Teal do nearly if not exactly the same thing when trying to escape observation. The Golden-eyes maintained this posture anywhere from one or two to eight or ten seconds at a time.

*Forward thrust of head and neck ending in the bowsprit posture.* The drakes assumed this attitude by suddenly thrusting their heads and necks forward and upward from the normal position (this was evidently the usual way) or by raising them more slowly from the crouching or the wounded-duck posture. I saw them take it a dozen times or more. On each occasion the bird remained absolutely motionless for several seconds with its neck elongated to the utmost and held perfectly straight and rigid at an angle with the water of about  $45^{\circ}$ , suggesting the bowsprit of a vessel of ancient type. Although this pose is apparently taken less frequently than some of the others, it appears to be not less deliberate and pronounced than the rest and equally expressive of emotions due primarily to sexual excitement. During its continuance the feathers of the head were sometimes fluffed out, but oftener pressed down so very flat that the head looked scarce thicker than the neck which, because of its unusual elongation, appeared abnormally slender. The bill was only slightly opened. As a rule the bird kept silent when in this position, but twice I *saw*, as well as heard, it bleat. In one of these instances it kicked up water just as it uttered the *paaap*; in the other this action was omitted. When the head was raised to the bow-sprit posture from the crouching or the wounded-duck pose the movement was not especially rapid; but when it was thrust directly forward and upward from the normal position the action was so swift and abrupt that my eye could scarce follow it. Although I witnessed the bowsprit posture a number of times it was assumed less often than either of the two fixed positions which I am about to describe.

*Upward thrust of head and neck ending in the mast-head posture.*

Ordinarily this movement was complete in itself and made directly from—as well as back to—the normal position. Occasionally, however, it closely preceded or immediately followed a still longer backward swing—yet to be described. In the pose to which it commonly led—i. e., the *mast-head pose*—the Whistler's neck might be elongated and straightened, as in the *bow-sprit posture*, and held stiffly erect, or it might be so shortened and curved that the occiput almost touched the back between the shoulders. In either case the bill was invariably well opened and pointed skyward for several seconds during which the head and neck were kept perfectly rigid. At the close of this brief period of inaction the bird frequently uttered its *paaap* and kicked up spray, but oftener than not I heard no sound and saw no water fly.

*Back thrust of head and neck ending in the folded duck-skin posture.* Sometimes made from the mast-head posture but far oftener directly from the normal position, by a single uninterrupted upward and backward swing of the head and neck; this movement was so swift and sudden that I often failed to follow it even when watching for it with my attention concentrated on a bird which I felt confident was about to make it. At its termination the neck lay extended along the back and so very flat and close that it was scarce noticeable. The head showed conspicuously enough, resting apparently on the occiput at a point anywhere between the middle of the back and the rump, with the widely-parted mandibles pointing straight upward. When in this posture the bird bore a ludicrously close resemblance to a duck skin prepared after the style so much in vogue thirty or

forty years ago, that is to say with the neck folded over on the back. In the skin, however, the head was differently disposed, being placed on its side to save as much vertical space as possible in the cabinet drawer. The living bird would ordinarily remain in the attitude just described from half a second to a full second or perhaps two seconds but rarely longer than that. At the close of this brief period of inaction the head and neck would swing forward, usually less rapidly and abruptly than when carried backward, sometimes pausing for a moment when the mast-head posture might be taken, but, as a rule, continuing to move without decided halt until the normal position was resumed. Rather oftener than not this entire performance was unaccompanied by any sound that reached my ears, even when the birds were near at hand, but not infrequently the *paap* was heard. As nearly as I could ascertain it was given only when the head was raised above the back or shoulders and either moving slowly forward or fixed for an instant, perhaps in the mast-head position; but it was difficult to be sure about this, for allowance had to be made for the time required for sound to travel one or perhaps two hundred yards. It is possible, therefore, that the note was occasionally uttered when the occupant of the bird was still resting on its back or rump, but if so I failed to satisfy myself that such was ever the case. The best evidence as to the precise instant when the call was emitted was afforded, I thought, by the shower of water that the bird usually (but by no means invariably) kicked into the air when calling. As nearly as I was able to determine, this action either accompanied or very closely followed the production of the vocal note. It may be however that the interval between the two is longer than my observations have led me to suppose.

The Whistler drakes often indulged in forms of gesturing or posturing more or less nearly akin to some of those already described yet different in certain respects. Thus they would sometimes take the bowsprit or topmast posture without becoming rigid in it or maintaining it for more than a fraction of a second. Frequently they would dip their bills in the water and then extend them as far forward or upward as they could well reach, at the same time opening and closing their mandibles and quivering their throats as if swallowing rather violently. On closely approaching one another or one of the females they often bobbed their heads up and down two or three times in quick succession. This seemed to be a form of polite salutation, but it may have had a different meaning. During most of the more pronounced movements of the head, and not infrequently when it was held at rest, its feathers were alternately raised or fluffed and depressed or flattened down, so that at one instant it looked almost twice and at the next barely one-half its usual size. This was probably done to show the plumage of the head to the best advantage. At least I so concluded as I watched its greenish sheen flash and glimmer in the sunlight and then disappear, to blaze out again with renewed lustre a moment later. The changes in the adjustment of the feathers of the head resulted also in striking and very interesting variations in its apparent shape.

When two or more males were showing off in the presence of the females they seemed to perform in a spirit of friendly, or, at least, dispassionate, rivalry. Not once during the entire morning did I see one of them exhibit any trace of animosity or unfriendliness towards another. There were no threatening or intimidating gestures and no apparent desire to interfere with one another in any way even when several males were grouped about a single female. Indeed they appeared to be almost wholly absorbed in their attentions to the females and to maintain towards one another an air of cool yet perfectly polite indifference or aloofness. This apparent absence of any sexual jealousy on their part struck me as being very re-

markable. I wonder if it continues to be absent later in the season when sexual intercourse is near at hand.

The more elaborate of the ceremonials of courtship above described were seldom if ever performed this morning by solitary males, even when accompanied by females, nor did they occur when females were absent or far removed. Indeed I witnessed them only when at least two or three, oftener four or five, and sometimes as many as *nine* drakes were in rather close association with one or more females. Often the males would collect about a female in a rather scattered group and entertain her for minutes at a time by their grotesque actions and peculiar love calls. Whenever this happened the female remained, for the most part, comparatively inactive and apparently quite indifferent to the attentions of her showy admirers, although she might occasionally single out and obviously encourage one of them by approaching him closely and bobbing her head up and down a few times. To this salutation he would immediately respond by a corresponding action before beginning his more elaborate performances again. Sometimes the female would suddenly assume the crouching posture which would be instantly imitated by one or more of the males. Once I saw a bird which was unquestionably a female, first nod, next crouch, and then take the bowsprit pose! This behaviour on her part created intense excitement among the attendant drakes who, to the number of at least five or six, crowded close about her for a moment, but were quickly dispersed, I thought by some aggressive movement on her part although the whole thing occurred so quickly that I could not see exactly what happened at the end.

For nearly half an hour a picturesque line of birds, consisting of nine full plumaged males and two females, paraded on the glassy water well off shore and about two hundred yards from where I was sitting. They swam back and forth, over a perfectly straight course three hundred yards and more in length, moving slowly but steadily in single file, the females close together and ever in the lead, the proud drakes following them and each other at intervals varying from six or ten to fifteen or twenty feet. Although this orderly procession seldom halted, even for an instant, the males were almost incessantly posing and bleating and kicking up the little jets of water at their sterns, as they glided sedately over the calm surface of the bay. Apparently they performed by turns, not in any regular order nor at uniform intervals, but wholly at hap-hazard as far as sequence was concerned, although each bird seemed to take pains not to begin until his immediate predecessor had nearly or quite finished. The females swam slowly on in advance without once turning their heads or giving other evidence that they noted what was happening behind them; nevertheless, it probably did not escape their close and critical attention, for ducks, like many other birds, can see well enough to the rear when their bills are pointing straight ahead. I watched this scene with absorbing interest because of its novelty and picturesqueness. A small group of Golden-eyes which, for a shorter time, paraded in a similar manner nearer at hand, included three drakes in full nuptial dress and two in immature plumage.

The latter birds were distinguishable from the single female to which they were paying attention, only by their much larger size and by the presence of a few white feathers among their scapulars and on their heads. Yet they posed and bleated to her quite as ardently as did the older drakes, seeming, indeed, to have already mastered all the arts and graces of Whistler courtship.

When not absorbed in watching the courting birds I paid some rather close attention to those which were diving for food. As far as I could see (and they were very near me at times) their wings were always kept tightly closed or folded as long as they remained in sight. Their tails were invariably spread to the utmost

possible width just as they disappeared. As a rule the downward plunge was made without much apparent effort, the bird simply immersing its head and then vanishing with surprising if not mysterious quickness. Occasionally, however, it would spring upwards and forward in the manner of a Grebe or Merganser, sometimes showing not only the entire outline of the lower parts of the body above the surface but also the whole of the legs and feet, just before re-entering the water. This may be done to give greater impetus to the descent; but I observed that the same bird would sometimes alternate one method with the other during a succession of dives made over exactly the same spot.

### THE PALLID WREN-TIT (*CHAMAEA FASCIATA HENSHAWI*)

By J. H. BOWLES

TO any bird student who has not previously made their acquaintance, the Wren-Tit must at once stand in the foremost rank of all the California birds. *C. f. henshawii* is the form of this species that is found in the vicinity of Santa Barbara, the locality in which all of the following notes have been made.

The Wren-Tits are most certainly well named, for their general appearance and shape at once remind one of a greatly magnified Bush-Tit. Add to this their wren-like fondness for haunting the ground and low brush, peering out at you with tail aloft, and the name forms an ideal combination. Occasionally, however, they may be seen gleaning insects among the topmost branches of a live-oak, the tit in them seeming to have asserted the mastery over the wren for the time being.

Eternal cheerfulness is theirs, beyond a doubt, for they sing every day in the year, be it rain or shine. Their two songs differ completely, and here again they seem to demonstrate their right to a hyphenated family name. The most common song is a rather loud and very pleasing wren-like trill, which, incidentally, nine people out of ten in southern California will tell you is that of the Canyon Wren. The other song is a succession of about six or eight, loud and somewhat chicken-tike *peeps*, rapidly executed and hardly worthy of being called a song. It is quite different from anything else that I have ever heard, except that it forms a very fair elaboration of what some of the Tits consider their song notes.

In the matter of food they appear to be very nearly omnivorous. Their main staples are bugs, beetles, larvae and insects of all descriptions, but they are also fond of the smaller berries, such as those of the Poison Oak (*Rhus diversiloba*). For a time I made some attempts at trapping the smaller mammals, using dry bread or cheese as baits, but it was necessary to give this up, as upon every visit to the traps I found that one or more Wren-Tits had succumbed to the temptation of these new items on the bill of fare.

Around Santa Barbara they are resident throughout the year, and to the best of my belief remain mated for life. This theory is based upon the fact that they are almost invariably found travelling in couples; for, should you, at any season come upon one bird, another is sure to be only a few feet distant. Nest building commences during the last two weeks of March, my earliest full set of fresh eggs being found on April 4. From that time, eggs may be found until at least the second week in May, but I have seen no evidence to conclude that more than one brood is reared in the season. A rocky hillside, thickly covered with live-oak bushes is the favorite nesting site in this locality, though they may sometimes be

found nesting in the sage (*Artemesia*) of the lowland country. The nest, in both location and construction, is not in the least what the uninitiated oölogist would expect in this type of bird. The first one I ever saw was building and, no birds being present, I felt sure it must belong to some kind of flycatcher that had escaped my notice, so closely did it resemble certain types of nests of the Traill Flycatcher (*Empidonax trailli trailli*) that I have found. It was a perfectly typical nest, both in location and construction, being placed about one foot from the ground in the crotch of a live-oak bush that stood in a dense thicket of the same. It is built externally of silky plant fibres, fine strips of bark and fine dead grass, the lining being mostly of horse hair. The measurements are externally four inches in diameter, by a little less than three inches in depth; internal dimensions being two and one-quarter inches wide, by one and three-quarters deep. I have seen one nest as high as five feet above the ground, but this is most unusual, three feet up being considerably higher than the average.

The eggs in all the nests that I have examined were invariably four in number to the set. They are most attractive in appearance, being greenish blue in color, without markings of any kind. In shape they are a rounded-oval, as a rule, averaging in size about .74X.57 inches.

The female appears to commence covering the eggs much of the time before the set is completed, as on two occasions I have found the bird sitting on three eggs, to which a fourth was added on the day following. Even under these circumstances the bird is exceedingly loath to leave the nest, and after incubation commences it is necessary to startle her very considerably, or remove her by hand, in order to examine the contents of the nest. She will then very often remain in the same bush, scolding in a low, harsh *ch-ch-ch*, continuously and very rapidly repeated. This usually brings up the male, who looks over the situation for a moment or two and then returns to his singing, feeling apparently not the least sympathy with the vigorous protests of his mate. I have noticed this habit in several other varieties of birds, and have often asked myself if it might not, instead of lack of sympathy, be another method of endeavoring to draw the attention of an intruder away from the nest.

## COLLECTING SOCORRO AND BLACK PETRELS IN LOWER CALIFORNIA

By PINGREE I. OSBURN

WITH TWO PHOTOS

THIS Genus of birds (*Oceanodroma*) is to the author one of unusual interest. Every available opportunity that has come my way for five years past has been made use of to become better acquainted with sea fowl in general and the Petrels in particular. For this reason the Los Coronados Islands were visited several times in recent years, each stay consisting of from one day to two weeks. While I was disappointed by not finding these particular birds on all my trips, the entire number of days ashore in active work among their burrows would number a satisfactory total.

The two trips of most importance were on July 3, 1909 (the third trip), and June 19 of the present year (the sixth trip). The first was in company with Mr. Willis Ritchie, and the second with Mr. A. B. Howell. I wish to hereby acknowl-

edge my indebtedness to Mr. Ritchie for his vigorous, unselfish work throughout our entire stay.

On the last trip I was compelled through lack of other means of transportation to make the return trip in a large sea-going cedar canoe, which was manned by two stalwart pearl divers. These islands are now isolated. A year ago a noisy little steamer made the trip down the forty miles of intervening water from San Diego irregularly every week, but this has been abandoned now and the islands are only visited by coasting fishermen, or perhaps smugglers.

My first impression of the two middle islands, where most of these observations were taken, was unfavorable. Devoid of vegetation around the sides except for a spot here and there of scrub ice plant or wind blown cactus, they appear barren and desolate. By the time Petrels are ready to lay the Braudt Cormorants (*Phalacrocorax penicillatus*) and Western Gulls (*Larus occidentalis*), which make their homes on the rocks, are deserting their summer homes. Skirting the outlying rocks, an occasional flitting Coronado Song Sparrow (*Melospiza m. coronatorum*)



Fig. 16. MIDDLE ISLAND, LOS CORONADOS, SHOWING AREA OCCUPIED BY PETRELS

or San Clemente House Finch (*Carpodacus mexicanus clementis*) were the only land birds seen. These with an alarmed Black Oystercatcher (*Haematopus bachmani*) and a few Western Gulls perched overhead on prominent rocks were all the birds in sight. Not until we had landed could the amphitheatre, the chief home of the Petrels, be distinctly seen. But here in a few hours time, on my very first visit in 1905, I found enough to prove my first impression entirely wrong. Desolate? No! For hundreds of stout little feathered beings resorted to this spot for their summer home.

The easternmost of the two middle islands I found to be the most accessible; for while landing on the other middle island our cedar canoe was overturned in deep water, and shot gun, kodak, and egg boxes were drenched, but finally rescued. On this island I found Socorro Petrels in the greatest numbers, and with hard work succeeded in collecting a representative series of eggs on July 3, 1909. Mr. Ritchie and I took in all twenty-two sets of Socorro Petrel and five sets of Black Petrel. At this date the eggs were fresh, but the Socorro Petrels were not breeding com-

monly. A favorite locality for burrows was in the loose loamy soil on the slope of the saddle at the east end of the island. A few were found nesting on a steep, treacherous, open cliff on the western exposure. Here the birds had burrowed in under loose, flat rocks; and a tunnel enlarged sufficiently to admit one's hand would usually bring the entire immediate vicinity down on one's head. This mode was given up after a few attempts at dodging boulders and picking a "non-cactus" place for a foothold.

In the amphitheatre the nests were much more accessible, some burrows being not more than ten inches in length, but others were dug out where the egg was deposited five feet from the entrance. The longest burrows were zig-zag tunnels around loose boulders in the softest soil, and took considerable effort before the end was reached. The nests themselves were usually composed of matted grass and feathers with an under layer of sticks and pebbles. I found some with merely a scratched-out depression in the soft earth, with finely powdered loam heaped around the rim of the hollow to hold the eggs. The burrows showed but little



Fig. 17. BURROW OF BLACK PETREL, EXPOSED TO SHOW NEST CAVITY; ENTRANCE AT LEFT

signs of the incoming of the birds as compared with those of the Murrelets. I often found large caves, one measuring at least fifteen feet square, carpeted with soft earth which was sensitive to impressions. The floor of one large cave was a mass of tiny overlapping Murrelet tracks. In this cave the Murrelets burrowed back into almost inaccessible crannies and crevices, where they were easily found, but hard to reach. They probably use these caves as convenient roosting grounds or for nocturnal love walks, as but few of the burrows in such localities were found to be nesting sites, and none contained more than fragments of faded egg shells. I used a candle for locating eggs in one particularly deep cave, and lying prone shoved the light down the shaft ahead of me until for want of oxygen it flickered and failed. This cave was a tight fit and my companion was luckily there and pulled me out by the heels.

The sharp, thorny, buckthorn bushes completely obscure the burrows of the Petrels on the brushy area, and offer great protection to them also, as our gloves in shreds were witnesses after a few hours work. Early in the season when the islands were visited, two birds were usually found in a burrow; later, brooding birds only.

Nearly always the eggs were not quite at the end of the passage. While probably not a premeditated fact, this often helped the birds to escape by frantically digging into another passage. The strong musky odor of the Petrel does not become disagreeable, at least not for several hours. From the moment your hand touches the feathery mass until he makes his exit, the Petrel makes use of this weapon of defense. Drawing the upper and lower mandibles widely apart, he emits a thin strong stream of musky oil.

I found Petrels nesting far above the sea on top of the islands. The main colony was at least thirty feet above the water, and none were as close to the water's edge as were the Murrelets, which I often found in caves whose entrances were submerged in deep water. As a rule the Petrels nested in more secure localities than the Murrelets, and were less often found with damaged egg shells. Half the Murrelets eggs found were dented or slightly cracked by loose pebbles from the roof of the burrow, and a set with an entirely unblemished shell was uncommon. The greatest difference in the nesting of the two Petrels was in burrowing sites and laying dates. The Black Petrels lay earlier. They were more abundant than the Socorro Petrel on the *largest* middle island, and while digging Murrelets I found several burrows containing Petrels. Here also among the hard boulders we found burrows where the brooding bird was in full view and yet inaccessible, so small was the opening. No young birds or immatures of either form were seen, and from incubation stages noted I should judge the hatching point is reached between July 15 and August 15. We saw little of the birds except in their burrows, but they were very active at night.

Of the skins I collected, there is great variation shown in the series of *O. socorroensis*. In two examples the upper tail coverts are white, with dusky median stripes; while in others these coverts are entirely dusky. There is a marked variation in size, also.

The eggs of *O. socorroensis* are white and either minutely speckled with lavender and brown, in a wreath about the larger end, or clear and immaculate. Average measurements (in inches),  $1.20 \times 0.90$ .

The eggs of *O. melania* are white with almost imperceptible traces of brownish speckling. They do not show variation in size or color as much as do those of *O. socorroensis*. The eggs average in inches,  $1.45 \times 1.05$ . Specimens of *O. melania* are unvarying in plumage. My series of skins show the uniform sooty-black color with the exception of the usual light wing-patch, which is characteristic of the dark-colored species of *Oceanodroma*.

## FROM FIELD AND STUDY

**A Second Occurrence of the Bohemian Waxwing in Southern California.**—In THE CONDOR, vol. VII, page 77, a Bohemian Waxwing is recorded as having been taken at Victorville, December 31, 1904. It is the first record of that bird in California outside of Plumas and Lassen counties.

On December 13, 1910, I took an adult female Bohemian Waxwing (*Bombycilla garrula*), six miles east of Daggett, San Bernardino County, which is about thirty miles north and fifteen miles east of Victorville. The bird was alone and was perched on the topmost limb of a dead cottonwood when I shot it.

The elevation here is about 2000 feet. Unlike the previous record we had had no storm in the vicinity, the weather having been unusually mild.—CHESTER LAMB.

**The Western Winter Wren** (*Nannus hiemalis pacificus*) at Santa Barbara.—On November 14, 1910, Mr. Watson Snyder of Newark, N. J., told me he saw one of these wrens in a small canyon on the outskirts of town. We visited the locality on the day following, but were unsuccessful in locating our bird.

On November 26, Mr. Snyder reported another in a canyon situated a number of miles from where he saw the first. I visited this place on the day following and was successful in seeing three, of which I secured one for my collection.—J. H. BOWLES.

**Notes from Ventura County, California.**—On May 12, 1910, Sidney Peyton found a set of eggs of Anthony Green Heron (*Butorides virescens anthonyi*) in an old crow's nest in a swamp east of the Sespe River. It consisted of six considerably incubated eggs.

On October 23, 1910, I found a nest of the Green-backed Goldfinch (*Astragalinus ps. hesperophilus*) in a walnut tree near my home at Sespe. It contained four nearly grown young. They left the nest on October 29. Harold Pyle found a nest on October 26 which contained four young birds. They left the nest November 8.—LAWRENCE PEYTON.

**A Stray White Pelican.**—I recently inspected the skin of a White Pelican (*Pelecanus erythrorhynchos*) that was captured on November 27 in the vicinity of Lankershim, Los Angeles County, California. It had been wounded by a rifle ball, but when found was still alive and very pugnacious, though the appearance of the surrounding ground indicated that it had had an all night fight with the coyotes. It died soon after.—J. EUGENE LAW.

**Notes from Santa Barbara.**—The Western Grasshopper Sparrow (*Ammodramus sava-narum bimaculatus*) is a common summer resident in the vicinity of Santa Barbara, California. I secured a set of five eggs last summer and found several nests with young.

Wilson Phalaropes (*Steganopus tricolor*) stayed around here a good deal this fall. I saw a pair on July 22, three together on August 3, and a pair on September 8; one of the latter was shot. They all stayed around for some time; but these three dates must certainly have been for different birds.

I first saw the Pectoral Sandpiper (*Pisobia maculata*) this fall on September 8, and collected one on September 9.—J. H. BOWLES.

**Notes from Sacaton, Arizona.**—The fall of 1910 was prolific in the occurrence of unusual bird visitors, and I send the following notes concerning them.

September 3, a Rocky Mountain Nuthatch (*Sitta carolinensis nelsoni*) made his appearance and was later joined by several more. They were here till the first week in December, when I saw the last one.

September 5, I secured a male Ant-eating Woodpecker (*Melanerpes formicivorus formicivorus*), being the second one seen in three years. When first seen, he was at work on a mesquite wood-pile in the back-yard.

October 5, a Red-breasted Nuthatch (*Sitta canadensis*) was seen on a cement irrigating ditch, which was probably rather poor picking. Later in the day I saw him or another, and during the month following I saw several. One day I noticed one fly several times from a tree trunk, warbler-like, and snap up worms hanging at the ends of webs.

The most incongruous combination was a Clarke Nutcracker (*Nucifraga columbiana*) perched on a Deglet Noor date tree the morning of October 17. He was quite tame and though an instinct demanded his acquisition as an avian record for this locality I refrained and he departed in peace about noon.

His place however was taken that afternoon by a Long-crested Jay (*Cyanocitta stelleri diademata*) which I saw in some cotton-wood trees along a field of Egyptian cotton. Several of these jays were seen the next day and were around till November 22 when the last was seen. The most seen at one time were seven in a flock. They were strangely silent for these jays, perhaps feeling like strangers in a strange land.

October 23, a Townsend Solitaire (*Myadestes townsendi*) was seen in the date grove.

November 21, while driving across the desert, I found a Whistling Swan (*Olor columbianus*) with a crippled wing. He could half fly and half run and it took quite a chase to run him down. It was a long ways from water so I gave him a drink from my canteen which he seemed glad to get, and putting him in the wagon took him home. Here I placed him in a big irrigating ditch with grassy banks and gave him corn, wheat and bread. I hoped his wing would heal but he grew weaker and died the fourth day.—M. FRENCH GILMAN.

# THE CONDOR

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of Western Ornithology

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## EDITORIAL NOTES AND NEWS

In the vote regarding simplified spelling, 107 Cooper Club members expressed their opinion distinctly one way or the other. There were 44 votes for the continued use of simplified spelling in our magazine and 63 votes against it. Thus the Editor was disappointed in his cherished hope. He has become convinced that people are innately averse to an abrupt change even when admittedly to a considerable degree beneficial in its bearings. Just as with song sparrows and chipmunks, modifications, in adjustment to changing environment, are matters of slow and gradual transition. As with these animals, too, variations are more extreme and rapid on the frontier of invasion. The species becomes plastic under stress of new conditions. The vote in the West alone gives a majority for simplified spelling.

We are informed that Mr. Wilfred H. Osgood, with Mr. Stanley G. Jewett as assistant, is about to leave for South America where zoological field work is to be carried on in the Andes Mountains in Venezuela and Colombia. This expedition is sent out under the auspices of the Field Museum of Natural History, Chicago.

The Northern Division of the Cooper Club has settled upon the third Saturday evening of each month as a regular time of meeting. Distant members who happen to visit the San Francisco Bay region should remember this, and also that until further notice meetings are

held in the research room of the Museum of Vertebrate Zoology, Berkeley.

Austin Paul Smith has established himself at Orizaba, Mexico, for a period of field work with the birds of that region.

Denver newspapers report that great numbers of wild ducks have died in the Bear River district of Utah. There is apparently some epidemic resembling the roup of chickens, which is afflicting the water fowl to such an extent that gunners are leaving them alone, not finding it enjoyable to shoot or eat sick birds.

Students of California ornithology will be interested to know that there are at present 525 species of birds definitely recorded from within the limits of the State of California. Of these, 163 are water birds and 362 land birds.

We are pleased to announce that Mr. W. L. Dawson has come south with carefully elaborated plans for the preparation of a sumptuous and exhaustive work upon the Birds of California. Mr. Dawson brings to his proposed task a unique equipment. Endowed with excellent taste, and skilled in photography, he is also schooled in business methods and does his own "managing." He writes with great acceptance and his knowledge of the scientific framework of his profession is beyond that of most "popular" writers. While he is not a "native son", he is thoroughly imbued with the western spirit; and his experience of fifteen years in the State of Washington gives him a great leverage in the ready understanding of the birds of California. Moreover, his very ability to look at the local conditions with fresh eyes will be a positive advantage in the exposition of our bird life, when to it is added the experience of older workers who long ago ceased to wonder. A keen eye, a ready pen, a sparkling style, coupled with a conscientious striving for accuracy of statement, and, above all, a sense of what the public needs, make our friend from Washington singularly well fitted to lead in an enterprise such as the one contemplated.

Mr. Dawson comes frankly asking the help of the members of the Cooper Ornithological Club. His task would be difficult of accomplishment alone. He must, in the nature of the case, be largely dependent upon the accumulated results of the labor of others, both published and unpublished. And since even this is insufficient, as yet, as we all know, he is especially desirous of enlisting the friendly services of as many other bird students as possible in a five year campaign of cooperative observation. Mr. Dawson will himself spend the best part of the next five years afield with his cameras and a trained assistant, visiting out-of-the-way places, as well as the better known bird-haunts, in quest of material for the new book. In this way he will be able to familiarize himself with the ground so as to edit the work of others intelligently, as well as to make some original contribution to our knowledge of the birds of California.

There can be no question of our need for just

such a work as the one proposed. Photographic processes and methods of reproduction have now reached a stage of perfection which makes the full and artistic representation of our bird-life not only desirable but imperative. There is, so far as we have been informed, no promise of any other such work in the reasonably near future. Yet the popular interest in birds is really very great. It is undeveloped, latent, often unintelligent indeed, but it is really more powerful and more nearly universal than many of us who follow ornithology as a hobby or as a science are aware. A work addressed to this larger public will be of the greatest value, not only in the direct service of that public, but in guaranteeing a more intelligent consideration of the legislative and protective measures and in arousing a more ready support for museums and other scientific institutions. Mr. Dawson is the man to do this work in California and we rejoice at his coming.

We own we are a little dazzled by the brilliancy of the program outlined by the author: editions de luxe, and illustrations on a scale of magnificence rarely if ever before attempted in the history of American bird-book making; but Mr. Dawson made good in Washington, both as a writer and as a book-builder, and there is no reason that we can see why he should not achieve success here in California.

Mr. Dawson's plans have been enthusiastically ratified in open meeting by both divisions of the Cooper Club; and the Club is pledged to extend to the new enterprise its fullest moral support. The name of the Club is to be associated with that of the author upon the title page of "The Birds of California" and the work is to be, in so far as it is possible, a cooperative one.

With characteristic energy the author launched the canvass for the new work in San Francisco immediately upon receiving the Club's endorsement and under the patronage of the Messrs. Mailliard has succeeded in enlisting enough influential support to assure a good beginning and to justify the expectation of a general public interest. He has now gone to Pasadena and Los Angeles to develop the local interest there, and expects at the close of a six weeks campaign to complete the organization of The Birds of California Publishing Company which is to finance the new undertaking. In a succeeding issue of this magazine we shall expect Mr. Dawson to set forth in detail the scope and specifications of the proposed work, as well as to tell us more particularly how Cooper Club members may cooperate.

#### PUBLICATIONS REVIEWED

NOTES ON THE BIRDS OF PIMA COUNTY, ARIZONA. By STEPHEN SARGENT VISHNER. [From *The Auk*, vol. XXVII, July 1910; pp. 279-288.]

This list of 127 species covers a part of the ground that was treated in great detail by W. E. D. Scott in *The Auk* for 1886-88, and is published partly for the purpose of adding several species not included in Scott's list, and largely

(according to the introduction) with "the desire to add a mite to the far too meagre knowledge of the habits and songs of many interesting birds." As it is seldom that more than a line or two is devoted to a species, this phase of the subject is perhaps not entered into as exhaustively as might be expected from the introductory remark. Two species are here recorded from Arizona for the first time, the White-headed Woodpecker and the Golden Plover, neither from specimens actually secured. The list is all through compared with that of Scott's and it is put forward largely as a compilation of the additional ornithological notes and information accumulated since the publication of the latter. Yet we find numerous species recorded precisely as Scott treated them, but placed in the category of those found under different conditions.

The Green-tailed Towhee, Lutescent Warbler, and Yellow-headed Blackbird are casually mentioned as breeding in the vicinity of Tucson, records of sufficient importance to merit more detailed accounts—to say the least. So also with Mr. Visser's working out of the distribution of various closely related sub-species. To say that *Dendroica auduboni nigrifrons* is "resident" on the mountain tops, while *D. auduboni auduboni* nests in the valleys, that *Phalaenoptilus nuttalli nitidus* breeds in the mountains and *P. nuttalli nuttalli* in the valleys, and that *Sialia mexicana occidentalis* breeds in the spruces and *S. m. bairdi* in the pines, is, perhaps, definite enough; but these are positive statements that require much field work and the collecting of many specimens to back them up before they can be expected to be generally accepted.

On the whole, the important records are not put forward in such a way as to invite confidence in them, the statements regarding certain of the species are exactly such as have already been published about the same birds in the same general region, and the comments upon others are of absolute unimportance.

This list does not seem to have been carefully considered, and might well have been left unpublished.—H. S. S.

WATER BIRDS OF THE VICINITY OF POINT PINOS, CALIFORNIA, by ROLLO HOWARD BECK. (Proceedings Calif. Acad. Sciences, 4th ser., vol. iii, pp. 57-72; issued Sep. 17, 1910).

In this paper we are provided with the most important contribution to a knowledge of the oceanic bird-life of California since the appearance of the last one of Loomis's series of papers, in December, 1900. During the past seven years Beck, in his work for the California Academy of Sciences, has spent all put together 26 months in collecting water birds of Monterey Bay, with Pacific Grove as a basis. The results of his work in specimens, up to the San

Francisco fire of April, 1906, were all destroyed. But some of the field notes of this period are included in the present paper along with those resulting from the work in subsequent years. The present paper is based primarily on Beck's field observations; but critical notes on the large series of specimens secured since the fire are often added, and for these Loomis and Gifford, of the Academy's curatorial staff, are evidently largely responsible.

The paper under consideration is couched in excellent form, literarily and typographically, practically ideal in the latter respect, a rather rare thing in this day of hurriedly proof-read publications. The great value in the paper lies in the large addition to our knowledge of the seasonal occurrence of the species dealt with, especially the Jaegers, Gulls, Terns and Shearwaters. One species is newly recorded not only for California but for the American side of the Pacific, namely the Flesh-footed Shearwater (*Puffinus carneipes*), of which Beck has taken no less than ten specimens, from 1903 to 1907. Of *Puffinus bulleri*, of which only one example was previously known from Californian waters, ten more specimens have been secured, all in the fall. Of the Skua (*Megalestis skua*) a second specimen for California is recorded. A number of species previously thought to be of but casual occurrence along the Californian coast, have been found by Beck to occur regularly in large numbers. Only concentrated and long-continued work, such as this has been, can be expected to yield a knowledge of the true status of any pelagic avifauna.

The reader of the paper in hand is at once impressed with the uniform occurrence of certain usages at variance with ruling custom among American ornithologists. Trinomials are tabooed; but instead of treating all forms (both small-species and remotely divergent species) as binomials, all of the small-species or subspecies (evidently forms which are found to intergrade in any way) are lumped under a binomial, the earliest nomenclaturally appropriate name being employed. Thus our California Murre is just Murre, *Uria troille*; the Pacific Kittiwake is just Kittiwake, *Rissa tridactyla*; etc. This does not appear to be an advantageous move in the interests of a better knowledge either of the ranges or of the migration-routes of birds. The recognition of even the smallest geographic variants is essential. This was emphasized by Stejneger many years ago (*Birds of Kamtschatka*, 1885, p. 348), and the principle holds with increasing force.

The reader must recognize the peculiar usage above referred to, in weighing such records as that of "*Ereunetes pusillus*" for California, which is given as including *E. mauri*. The implication is that intergrades have been found between *E. pusillus* and *E. mauri*; but

no data is presented in this regard. In the same way, *Fulmarus rodgersi* is lumped under *F. glacialis*.

Doubt is cast upon the validity of *Brachyramphus craverii* as distinct from *B. hypoleucus*. *Larus brachyrhynchus* is combined with *Larus canus*; that is, the separate existence of a species *brachyrhynchus* is denied. This is at variance with the idea of Bishop (CONDOR XII, 1910, 174) that previous records of *Larus canus* for California should probably be referred to *Larus delawarensis*.

It would of course have been of enormous interest and value if the data substantiating of the above conclusions had been presented. However, the reader of the paper under review is left with the feeling that this is but a preliminary report, and that extended critical treatment may be expected to follow in due course. Certainly no ornithologists in the country are in a more fortunate position for the handling of problems of this sort than the persons connected with the California Academy of Sciences, whose Museum contains at the present time with little doubt the finest collection of water birds in America.—J. GRINNELL.

METHODS OF ATTRACTING BIRDS. By GILBERT H. TRAFTON; with thirty-nine illustrations (twenty-four of them from photographs) and a chart of fruits eaten by birds. Houghton Mifflin Company, Boston, September 1910, pp. xv+164; price \$1.25 net.

This book, published under the auspices of the National Association of Audubon Societies, "has been written from two view-points, that of birds and that of human beings; for the protection of the former and the pleasure of the latter."

It is written by the Supervisor of Nature-Study, Passaic, N. J., and gives beside his own experience, the results of many observers, thus summarizing very completely the work being done throughout the country. An appendix gives a list of ninety-one to whose contributions the author has had access, or who have furnished information through personal correspondence.

The practical value of the book in nature-study in the schools should be great; for the methods given have thus had the test of experience. A statement of the results obtained makes them the more valuable.

The chapters deal with the need and value of attracting birds; nesting houses; attracting the winter birds; drinking and bathing fountains; planting trees, shrubs, and vines; bird-protection in schools, and bird photography.

Special drawings bring out details of plans and constructions presented.

The methods given would seem to be well calculated to attain the results desired in the Audubon movement, by inculcating a love for

birds in the young student through his own work in providing protection for them.—H. T. C.

#### MINUTES OF COOPER CLUB MEETINGS

##### NORTHERN DIVISION

OCTOBER.—The October meeting of the Northern Division of the Club was held in the research room of the Museum of Vertebrate Zoology on the evening of October 22, with the following members present: J. Grinnell, J. Mailliard, Dr. C. Hart Merriam, L. H. Miller, M. Ray, Oluf Heinemann, D. Cohen, W. P. Taylor, Herbert Coggins, H. Carriger, T. I. Storer, H. C. Bryant and Mr. Judd. Dudley Brown was present as visitor.

The meeting was called to order by President Grinnell who called on Mr. W. P. Taylor to give the paper of the evening. Mr. Taylor gave a very interesting talk, illustrated by a number of skins, about the birds of the Modoc Region of northeastern California. At the conclusion of Mr. Taylor's talk the members indulged in a general discussion relative to the birds collected and as Dr. Merriam had explored at the same locality in former years the same proved very interesting.

The regular order of business was now taken up and the minutes of the last meeting were read, and approved as read. The minutes of the Southern Division were also read. The Secretary was instructed to cast the unanimous ballot of those present electing to active membership Messrs. Bryant, Stern, Storer, H. Coggins, Irving, Messinger and Beers, whose names had been presented at a former meeting. The applications of Dudley C. Brown, proposed by H. W. Carriger, Carl L. Hubbs, by L. H. Miller, and Donald R. Dickey, by Mr. Chambers, were presented and laid over till next meeting. Mr. Grinnell stated that W. Leon Dawson was coming to San Francisco, and would probably locate in California and spend the next four or five years in studying the birds of the State. Mr. Grinnell also spoke about the use of vernacular names and expressed his preference for California Condor, California Linnet, and Western Kingbird, instead of California Vulture, House Finch and Arkansas Kingbird as given in the new Check-List. The matter was discussed by the members present. Donald Cohen stated that the birds presented to the Club some years ago were in a school at Oakland and were being well taken care of. Adjourned.—H. W. CARRIGER, *Secretary*.

NOVEMBER.—The November meeting of the Northern Division of the Club was held on the evening of November 19 in the research room of the Museum of Vertebrate Zoology, with the following members present: W. K. Fisher, J.

Grinnell, J. Mailliard, H. S. Swarth, W. P. Taylor, W. Leon Dawson, M. Ray, O. Heinemann, H. Coggins, D. Brown, N. Stern, H. Bryant, P. Judd, T. Storer, and H. W. Carriger. Mr. Carroll was present as a visitor. The meeting was called to order at 8:15 p. m. with President Grinnell in the chair.

Mr. H. L. Coggins, formerly secretary of the Delaware Valley Ornithological Club, was introduced by the president and gave a very interesting account of that society, the interests, activities and membership of the club being briefly outlined in a most interesting and amusing manner.

At the conclusion of Mr. Coggins' talk the business of the club was taken up, and the minutes of the last meeting were read, and approved as read. On motion the secretary was instructed to cast the unanimous ballot of members present electing to active membership the following individuals, whose names were presented at the last meeting: Carl L. Hubbs, Donald R. Dickey, and Dudley H. Brown. The application of Althea R. Sherman, McGregor, Iowa, proposed by Mr. Chambers, was read and laid over till next meeting.

The committee having in charge the revision of the Club's constitution presented a draft of the same, and, on motion, the President referred it to a committee of three, consisting of Messrs. W. P. Taylor, J. Mailliard, and M. Ray. Mr. Grinnell spoke of the advisability of having stated nights on which the Club would meet, and on motion it was decided to meet every third Saturday of each month. The use of vernacular names was again discussed by the members but no definite action was taken.

The President then introduced Mr. W. Leon Dawson, author of the *Birds of Ohio*, and *Birds of Washington*; also secretary of the Caurinus Club of Washington. Mr. Dawson extended greetings from the Caurinus Club, and proceeded to outline his plans in regard to his proposed work on the *Birds of California*.

At the conclusion of Mr. Dawson's talk the members present discussed the matter, and a motion was made by Mr. J. Mailliard, seconded by Mr. W. P. Taylor, that the Cooper Ornithological Club heartily endorse Mr. Dawson's plans, and pledge its moral support and co-operation in the task of preparing a work upon *The Birds of California*. Motion was carried. A motion was made by Mr. W. K. Fisher, seconded by Mr. H. C. Bryant, that Mr. W. Leon Dawson be granted permission to associate the name of the Cooper Ornithological Club with his own on the title page of the forthcoming work, after the following formula: "The *Birds of California*, by W. Leon Dawson with the cooperation of the members of the Cooper Ornithological Club." This was carried also.

Mr. Dawson expressed his deep appreciation of the support given him. Adjourned.—H. W. CARRIGER, *Secretary*.

DECEMBER.—The December meeting of the Cooper Club was held in the research room of the Museum of Vertebrate Zoology, Berkeley, on the evening of December 17. The meeting was called to order with President Grinnell in the chair, and the following members present: J. Grinnell, H. S. Swarth, M. Ray, O. Heinemann, D. Brown, W. P. Taylor, J. Mailliard, H. Carriger, W. L. Dawson, H. Coggins, and J. L. Sloanaker. Captain F. Kleinschmidt was present as a visitor.

The minutes of the November meeting were read, and approved as read. Southern Division minutes were also read. The committee to whom the revised copy of the constitution was referred reported that they had carefully gone over the same, and, with a few minor changes, recommended that it be adopted. A motion made by Swarth and seconded by Storer that the constitution be adopted subject to approval of the Southern Division was unanimously carried.

President Grinnell spoke in regard to holding the A. O. U. meeting in San Francisco during 1915, and read a circular letter that he had mailed to eastern ornithologists urging such action. A motion was made by Mailliard, seconded by Swarth, that the president appoint a committee of three to see what could be done toward gaining this end. W. P. Taylor, H. Coggins, and M. Ray were appointed.

Mr. Grinnell stated that the vote in regard to simplified spelling in THE CONDOR had decided against such usage. The motion was made and carried deciding that the Club hold its annual banquet, and that the president be instructed to appoint a committee to attend to the same.

The president requested Mr. W. L. Dawson to give a statement regarding the progress of his work, and Mr. Dawson announced that everything looked exceptionally bright. Althea R. Sherman, whose name was presented at the last meeting, was elected a member. The names of Edward Boyer, Sparks, Nevada, and J. D. Sornborger, Rowley, Massachusetts, were proposed by W. Lee Chambers.

The nominations for officers for 1911 were declared open, and the following names were proposed: President, Joseph Mailliard; Vice-president, H. W. Carriger; Secretary, H. S. Swarth; Business Manager, W. Lee Chambers; Editor, Joseph Grinnell.

Mr. J. L. Sloanaker, of Fresno, expressed the desire of the ornithologists of that region to form a Chapter, and was told that the Club would favorably consider such an application if formally presented.

Captain Kleinschmidt gave a detailed and

interesting account of his discovery of the nest and eggs of the rare Spoon-billed Sandpiper in northeastern Siberia. Specimens of the bird, both adults and downy young, were exhibited. Mr. H. S. Swarth, who spent the summer on Vancouver Island, gave a brief talk about his trip. Adjourned.—H. W. CARRIGER, *Secretary*.

#### SOUTHERN DIVISION

NOVEMBER.—The November meeting of the Southern Division of the Cooper Club was held on Friday evening, November 25, 1910, in Room 1, City Hall, Los Angeles. In the absence of President Morcom the meeting was called to order by Vice-president Lelande, with the following members present: Messrs. Robertson, Chambers, Willett, Osburn, Alphonse Jay, Howell, Shepardson and Lelande. Messrs. Moses and Granville were visitors. In the absence of Secretary Law, Mr. W. Lee Chambers was appointed Secretary pro tem.

The minutes of the October meeting were read and approved. The following applications for membership were presented: Frank Edgar Johnson, Yonkers, N. Y., by Mr. W. Lee Chambers; Fred Granville, Los Angeles, by Mr. Howard Robertson.

Mr. Howard Robertson made a verbal report on the progress of the Southern California Museum. Work has already actively begun on this, and the Club has been asked to furnish data for the cornerstone. In compliance with a motion made by Willett, seconded by Osburn, and duly carried, the Chairman appointed Messrs. Law, Willett and Lelande, a committee to prepare proper data and see that it is placed in the cornerstone. On motion by Mr. Willett, seconded by Mr. Shepardson, and duly carried, the Southern Division approved the action of the Northern Division in endorsing the proposal of Mr. W. L. Dawson; and also pledged its moral support and co-operation in the task of preparing a work on the "Birds of California." It also approved the decision that Mr. Dawson be permitted to associate the name of the Cooper Club with his own in the title page of the work. On motion by Mr. Lelande, seconded by Mr. Chambers, and duly carried, the following resolution was unanimously adopted. Resolved—That the Southern Division of the Cooper Ornithological Club does hereby recommend Mr. Evan Davis, of Orange County, for an appointment as a member of the State Fish and Game Commission.

Mr. A. B. Howell exhibited a very fine series of bird photos covering a period spent on the Coronado Islands during 1910. A Paper entitled "Nesting Notes on the American Eared Grebe and Pied-billed Grebe" by Robert B. Rockwell, was read by Mr. Lelande and thoroughly enjoyed. Adjourned.—W. LEE CHAMBERS, *Secretary, pro tem*.

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**For Sale, Exchange and Want Column.**—In this space members of the Cooper Club are allowed one notice of about 35 words in each issue free of charge. Books and magazines can be offered for sale or exchange; bird skins and eggs can be offered in exchange, but *not for sale*. Notices must be written plainly, on one side only of a clean sheet of paper. For this department address W. LEE CHAMBERS, R. D. no. 1, Box 73 D, Los Angeles, Calif.

**FOR SALE OR EXCHANGE.**—The following fine sets: Audubon's Ornithological Biography, 1831-39, 5 vols. complete; Audubon's Synopsis of Birds of America, 1839; Nuttall's Manual, orig. ed., 1832-34, 2 vols. complete. *Wanted:* The Auk, vols. 1, 2, 3 and 6; The Osprey, new series, vol. 1; Swainson and Richardson's Fauna Boreali-Americana.—CHARLES R. KEVRS, Mt. Vernon, Iowa.

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**WANTED.**—Nidologist: Vol. I, all except no. 9; Vol. III, no. 12; Osprey: Vol. I, nos. 2, 4, 6, 8, Vol. IV, no. 3, Vol. V, all nos.; Condor: Vol. I, no. 2; Auk: Vol. IX, no. 3, and other whole volumes. Cash or sets offered.—DR. T. W. RICHARDS, U. S. NAVY, 1911 N Street, N. W., Washington, D. C.

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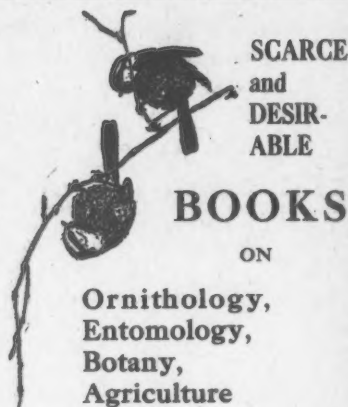
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